AMENDMENTS TO THE CLAIMS

Please amend the claims to read as follows:

1. (currently amended) ~~Transdermal~~ A transdermal delivery system (TDS) ~~having~~ comprising:

a carrier layer impermeable to a substance to be delivered~~,~~ and comprising one or more electrodes;

~~a membrane permeable to said substance to be delivered~~,

a reservoir containing said substance to be delivered, the reservoir ~~being~~ formed by a contact adhesive and provided between the carrier layer and ~~the membrane~~ one or more counter electrodes, ~~and~~

a removable film,

~~wherein the carrier layer and the membrane comprise electrodes such that the electrode(s) of the membrane serve(s) as counterelectrode(s) to the electrode(s) of the carrier layer~~

a battery,

an integrated controller microchip that is fixed to the carrier layer, and

a reading and writing device for writing onto the integrated controller microchip.

2. (previously presented) Delivery system according to claim 1, wherein the one or more electrodes of the carrier layer are arranged in the form of one or more electrode network(s) on the carrier layer, each electrode network having a plurality of individual electrodes.

3. (canceled)

4. (currently amended) Delivery system according to claim 1, ~~comprising~~ ~~a~~ wherein the carrier layer ~~having~~ has a thickness in the range from 10 µm to 1000 µm.

5. (canceled)

6. (currently amended) Delivery system according to claim 1, wherein the one or more electrodes of the carrier layer ~~and/or of the membrane~~ has/have been applied by printing.

7. (previously presented) Delivery system according to claim 2, wherein there is a plurality of electrode networks, each electrode network is actuatable individually or a plurality of electrode networks are actuatable in groups and/or each individual electrode in a

network is actuatable individually or a plurality of individual electrodes in a network are actuatable in groups.

8. – 10. (canceled)

11. (previously presented) Delivery system according to claim 3, wherein the microchip is securely bonded to the carrier layer.

12. (previously presented) Delivery system according to claim 3, wherein the microchip is a chip that is programmable according to a prescription.

13. (previously presented) Delivery system according to claim 3, wherein the battery is a button battery or a sheet battery.

14. (previously presented) Delivery system according to claim 3, wherein the battery is provided in a pocket in the carrier layer.

15. (canceled)

16. (new) Transdermal delivery system (TDS), comprising:

a carrier layer impermeable to a substance to be delivered;

a membrane permeable to said substance to be delivered;

a reservoir containing said substance to be delivered, the reservoir being provided between the carrier layer and the membrane;

a removable film;

a layer consisting of a pressure-sensitive contact adhesive applied to the side of the membrane remote from the reservoir;

a battery;

an integrated controller microchip fixed to the carrier layer; and

a reading and writing device for writing onto the integrated controller microchip, wherein the carrier layer and the membrane comprise one or more electrodes such that the one or more electrodes of the membrane serve(s) as counterelectrode(s) to the one or more electrodes of the carrier layer.

17. (new) Delivery system according to claim 16, wherein the carrier layer has a thickness in the range from 10 μm to 1000 μm.

18. (new) Delivery system according to claim 16, wherein the substance reservoir comprises a contact adhesive, a gel or an immobilised solution for the substance to be delivered.

19. (new) Delivery system according to claim 16, wherein the one or more electrodes of the carrier layer and/or of the membrane has/have been applied by printing.

20. (new) Delivery system according to claim 16, wherein there is a plurality of electrode networks, each electrode network is actuatable individually or a plurality of electrode networks are actuatable in groups and/or each individual electrode in a network is actuatable individually or a plurality of individual electrodes in a network are actuatable in groups.

21. (new) Delivery system according to claim 16, wherein the membrane permeable to said substance is electrically conductive and is a metal lattice, or a polymer lattice on which a conductive layer has been vopour-deposited, or a perforated conductive layer.

22. (new) Delivery system according to claim 16, wherein the membrane permeable to said substance is electrically conductive and has uninterrupted conductivity or has conductive areas that are separated by non-conductive areas, so that one or more networks of conductive areas are formed.

23. (new) Delivery system according to claim 22, wherein each electrode of the carrier layer corresponds to a counterelectrode with which it is uniquely associated.

24. (new) Delivery system according to claim 16, wherein the microchip is securely bonded to the carrier layer.

25. (new) Delivery system according to claim 16, wherein the microchip is a chip that is programmable according to a prescription.

26. (new) Delivery system according to claim 16, wherein the battery is a button battery or a sheet battery.

27. (new) Delivery system according to claim 16, wherein the battery is provided in a pocket in the carrier layer.